

Remarks

Claims 1-5, 8, and 10-13 were pending in the subject application. By this Amendment, the applicants have amended claim 1, cancelled claims 3, 8 and 10-13, and added new claim 15. No new matter has been introduced. Support for the amendments to the claims can be found throughout the original specification (see, for example, page 2, lines 29-31). Entry and consideration of the amendments presented herein is respectfully requested. Accordingly, claims 1, 2, 4, 5 and 15 are before the Examiner for further consideration.

The amendments to the claims have been made in an effort to lend greater clarity to the claimed subject matter and to expedite prosecution. These amendments should not be taken to indicate the applicants' agreement with, or acquiescence to, the rejections of record. Favorable consideration of the claims now presented, in view of the remarks and amendments set forth herein, is earnestly solicited.

Initially, the applicants' note that Mr. Ralph Gitomer was incorrectly referred to as the Supervisory Examiner in the remarks filed January 6, 2010. Mr. Gitomer's correct title is Primary Examiner in Art Unit 1657.

The applicants wish to thank Examiner Srivastava and Primary Examiner Gitomer for the courtesy extended to the undersigned during the telephonic Examiner Interview conducted September 15, 2010. This response and the amendments set forth herein are submitted in accordance with the substance of that interview and constitute a summary thereof.

Claims 1 and 8 have been objected to for including language that suggested that cells "germinate." Specifically, the Action indicates that the phrase "cell's metabolism, growth, and/or germination" is unclear because a cell does not germinate. In order to clarify this point, claim 1 has been amended to recite a method for "the detection of a product of cell metabolism and/or growth." Spore germination has been made the subject of a separate independent claim. Also, claim 8 has been cancelled herein. Thus, the applicants respectfully request reconsideration and withdrawal of the objection to claims 1 and 8.

Claims 8 and 10-13 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite. These claims have been cancelled herein; thereby rendering moot this ground for rejection.

Claims 1-5, 8 and 10-13 have been rejected under 35 U.S.C. §103(a) as being obvious over the combined teachings from Weimer *et al.* (U.S. Patent No. 6,399,317) in view of Bruno *et al.* (1996, *Applied and Environmental Microbiology* 62(9):3474-3476) and Lowe *et al.* (U.S. Patent No. 5,989,923). The applicants respectfully traverse this ground for rejection because the cited references, taken either alone or in combination, do not teach or suggest the claimed invention.

Claims 8 and 10-13 have been cancelled herein, thereby rendering moot this ground for rejection as it relates to those claims.

A key aspect of the subject invention is that it provides a method for monitoring the activity of a live cell. This advantageous feature is discussed at, for example, page 3, line 1 of the subject specification, as well as in the Examples. By contrast, the methods of the cited references cannot distinguish between live and dead cells, and do not facilitate (or suggest) monitoring the growth or metabolism of live cells, or the germination of spores.

Weimer *et al.* and Bruno *et al.* are cited in the Action for teaching methods of detecting cells; however, the methods of each of these references will detect all cells in a sample, whether dead or alive. Accordingly, there is no disclosure in these references of a method for detecting specific products of a cell's metabolism or growth, or a spore's germination.

The subject invention is based largely on the realization that a cell/spore will grow/germinate when immobilized on a surface in the presence of a growth medium and that a holographic detector can detect the relatively low levels of specific products resulting from the growth or metabolism of the live cell or germinating spore.

The mere fact that the prior art could have been modified or applied in some manner to yield an applicant's invention does not make the modification or application obvious unless "there was an apparent reason to combine the known elements in the fashion claimed" by the applicant. *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 127 S. Ct. 1727, 82 U.S.P.Q.2d 1385 (2007). Also, an applicant's invention is not "proved obvious merely by demonstrating that each of its elements was, independently, known in the (purported) prior art." *Id.*

In this case, a skilled artisan would not have had any reason to modify the teachings of Weimer *et al.* and Bruno *et al.*, either individually or the combination thereof, to include a sensor that is sensitive to a product of a cell's metabolism or growth, or a spore's germination. Both the

Weimer *et al.* reference and the Bruno *et al.* reference only teach the detection of the presence of a cell. Also, Lowe *et al.* fail to teach that a holographic sensor can be used to detect activity of a viable cell by detecting specific products of the cell's metabolism or growth.

Accordingly, the applicants respectfully request reconsideration and withdrawal of the rejection under 35 USC §103(a).

Claim 13 has been rejected under 35 U.S.C. §103(a) as being obvious over the combined teachings from Weimer *et al.* in view of Bruno *et al.* and Lowe *et al.* as applied to claims 1-5, 8, and 10-12 and further in view of Walt *et al.* (U.S. Patent No. 6,377,721). The applicants have cancelled claim 13, thereby rendering moot this ground for rejection.

In view of the foregoing remarks and the amendments to the claims, the applicants believe that the currently pending claims are in condition for allowance, and such action is respectfully requested.

The Commissioner is hereby authorized to charge any fees under 37 CFR §§1.16 or 1.17 as required by this paper to Deposit Account No. 19-0065.

The applicants invite the Examiner to call the undersigned if clarification is needed on any of this response, or if the Examiner believes a telephonic interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,



David R. Saliwanchik

Patent Attorney

Registration No. 31,794

Phone No.: 352-375-8100

Fax No.: 352-372-5800

Address: P.O. Box 142950

Gainesville, FL 32614-2950

DRS/la